CHAPTER 3.0
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A total of 16 environmental issue areas are evaluated in this Draft EIR/EIS. Sections 3.1 through 3.16 describe the affected environment, or existing conditions, within the project study area for each issue area, and disclose the environmental consequences associated with implementation of the proposed project, plus alternatives. The organization of each of these sections is described in more detail below.

To determine the environmental consequences, or impacts, for each issue area, the proposed project and its alternatives are compared to a baseline condition. Under CEQA, the difference between the proposed project/alternatives and the baseline is then compared to a threshold to determine if the difference is significant. Under NEPA, this difference is used to discuss the magnitude of the potential effect due to the proposed project/alternatives. CEQA and NEPA may use different baseline conditions. The CEQA and NEPA baselines used to analyze the SELRP are also presented below, following the overview of the organization of each section.

3.0.1 ORGANIZATION OF EACH SECTION

To assist in comparing information about the various environmental issues, each section is linked to an issue area and is organized in the manner outlined in the following paragraphs.

Affected Environment describes the existing conditions for both the lagoon study area (Figure 1-2) and the materials disposal/reuse study area (Figure 1-3). The Affected Environment provides a description of conditions before project implementation and serves as the baseline physical conditions for the analysis of project impacts. More detail regarding the baseline is provided following this overview. This section is consistent with NEPA terminology but corresponds to Existing Conditions under CEQA.

CEQA Thresholds of Significance defines specific criteria used to determine whether an impact is or is not considered to be significant under CEQA. CEQA requires that an EIR include a determination of significant effects and identification of feasible mitigation measures to minimize those effects, while NEPA does not. According to NEPA regulations, a finding of whether a proposed action significantly affects the quality of the human environment is determined by considering the context in which it will occur and the intensity of the action (40 CFR Section 1508.27). Therefore, NEPA uses significance to determine the level of

documentation required for projects. Once a decision to prepare an EIS has been made, the magnitude of impact is evaluated and no further judgment of its significance is required. The thresholds of significance identified in each issue area of this EIR/EIS and the impact determinations are, therefore, directly associated with the analysis under CEQA to determine the potential significant effects of the proposed project and its alternatives. To facilitate review, each CEQA significance criterion is identified with a letter, and conclusions under the analysis refer back to those criteria for each CEQA conclusion. CEQA regulations generally define a significant effect on the environment as a substantial or potentially substantial adverse change in the physical environment (CEQA Guidelines Sections 15064 and 15126.2). Determinations of significance made in this EIR/EIS apply only to CEQA, not to NEPA. The significance thresholds used in this EIR/EIS also encompass the factors taken into account under NEPA to evaluate the context and intensity of the SELRP, but provide a relative context for understanding the magnitude of potential impacts only.

Environmental Consequences provides independent analyses of the two project components: lagoon restoration and materials disposal/reuse. The four lagoon restoration alternatives and each of the materials disposal/reuse locations are analyzed at an equal level of detail. This approach allows for comparison of the alternatives under each resource area and will facilitate the ultimate selection of an agency-preferred alternative for the Final EIR/EIS. While the analyses for lagoon restoration and materials disposal/reuse are separate, this is not meant to imply there is no connection between activities. There may be occasions when activities would occur in similar locations and/or times, but the analyses have been separated simply to facilitate reading of the document. Consistent with federal and state regulations and guidelines (40 CFR Section 1508.27; CEQA Guidelines Section 15064, 15126.2[a]), direct and indirect impacts are evaluated. Cumulative impacts are evaluated in Chapter 5 of this EIR/EIS. This section is consistent with NEPA terminology but corresponds to Impact Analysis under CEQA.

For the lagoon restoration alternatives, Alternative 2A–proposed project has been identified as the proposed project since it would result in the largest degree of overall impact. As discussed in Section 2.3, the Agency Preferred Alternative may differ based on the analysis in this document and identification of the LEDPA through the 404(b)(1) Alternatives Analysis being conducted as part of the Corps permitting process. The identification of Alternative 2A as the proposed project does not reflect a preference for implementation of that alternative. The lagoon restoration evaluations provide a discussion of Alternative 2A–proposed project first, followed by Alternative 1B, Alternative 1A, and the No Project/No Federal Action Alternative, which represent incrementally lesser overall impacts. The analysis incorporates the implementation of design components, regulations, and proactive design features into the conclusions. Each alternative analysis addresses short-term impacts associated with construction of the lagoon restoration project. Permanent impact analyses address impacts associated with construction, as

well as long-term intermittent impacts associated with anticipated periodic maintenance and adaptive management of the lagoon.

For the SELRP, the restoration activities are water dependent and must be conducted within Corps jurisdiction to be effectively implemented. The No Federal Action Alternative, therefore, assumes that no activities would take place within Corps jurisdiction, which encompasses Escondido Creek and adjacent wetlands and riparian areas, the lagoon, and the Pacific Ocean. The only aspects of the project not within Corps jurisdiction are the construction staging and access roads, as well as some portions of Coast Highway 101 and the beach placement sites. Therefore, no restoration activities could occur without a federal action (a DA permit from the Corps) and the No Project Alternative is the same as the No Federal Action Alternative.

The materials disposal/reuse analysis is also organized by lagoon restoration alternative, then by generalized type of placement, as appropriate. Under Alternative 2A–proposed project and Alternative 1B, locations proposed for materials placement include offshore stockpile areas (SO-6 and SO-5), the nearshore zone (Cardiff), beaches (Leucadia, Moonlight, Cardiff, Solana Beach, and Torrey Pines), and on-site use for transition and nesting areas. Construction of Alternative 1A is associated with off-site disposal in LA-5 only, as well as limited on-site use for transition areas and nesting areas. Analysis of the overdredge pit is generally addressed under the lagoon restoration component since it would be located within the dredged area and is encompassed in the basin disturbance footprint. For many issue areas, the effects associated with sand placement would be related to the type of placement rather than specific placement sites. Where the specific locations could result in different effects, the impact analysis is clearly defined by site.

For both the lagoon restoration alternatives and materials disposal/reuse scenarios, the analyses present evidence for the cause-and-effect relationship between the project alternatives and the expected changes in the environment. The magnitude, duration, extent, frequency, range, or other parameters of an impact are identified, to the extent possible, to discuss the magnitude of the potential effect and determine whether impacts would be significant under CEQA, or substantially adverse under NEPA. All potential effects, including direct effects and reasonably foreseeable indirect effects, are considered. Following the analysis, the level of significance is identified, as defined by CEQA. An impact may be deemed one of the following: no impact, less than significant impact, significant but mitigable impact, or a significant and unavoidable impact. Effects considered substantially adverse under NEPA are also identified. The two conclusions may differ based on different approaches to impact determinations, since NEPA is not specifically threshold-driven for most resources. The definitions of these terms are provided following the more detailed discussion of baselines under CEQA and NEPA in Section 3.0.3.

It should be noted that the structure of Section 3.16 (Global Climate Change and Greenhouse Gas Emissions), varies slightly from the format described above. To thoroughly analyze the project's resiliency to sea level rise and extreme events, the proposed project and alternatives have been analyzed for the horizon years of 2065 and 2100, in accordance with guidance set forth by the State Coastal Conservancy (State Coastal Conservancy 2012). This section addresses greenhouse gas emissions as well as effects possibly related to predicted sea level rise.

Mitigation measures identify the means by which impacts could be reduced or avoided in cases where the analysis determines such impacts to be significant or substantially adverse under CEQA or NEPA, respectively. Standard existing regulations, requirements, programs, and procedure, as well as project design features in Table 2-25, are considered in the impacts analysis. It should also be noted that the SELRP is a restoration project, and therefore has proactively incorporated a number of features into design that avoid potentially significant impacts or enhance the ability of the project to successfully restore functions and services of the lagoon system. Specific mitigation measures are tied to a particular significant or substantially adverse impact identified within the analysis and describe additional, potentially feasible actions to minimize adverse impacts or reduce significant impacts to less than significant levels. Upon approval of the EIR/EIS, a mitigation monitoring program would be adopted to ensure implementation of identified mitigation measures. Project design features identified proactively would also be incorporated into final project requirements.

Significance after mitigation identifies the impacts that would remain after application of mitigation measures, and whether the remaining impacts would or would not be considered significant under CEQA. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "significant unavoidable impacts." Under CEQA, the lead agency must adopt a Statement of Overriding Considerations to approve a project with significant unavoidable impacts. In adopting such a statement, the lead agency finds that it has reviewed the EIR, has balanced the benefits of the project against the significant and unavoidable adverse environmental effects, and has determined that the benefits outweigh the adverse environmental effects. Thus, the significant and unavoidable environmental effects may be considered "acceptable."

3.0.2 CEQA AND NEPA BASELINES

As a joint EIR/EIS, this impact analysis considers both the CEQA and NEPA baselines. CEQA requires a project to review its impacts relative to "change from existing conditions," while NEPA directs that agencies use the process "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the environment" (40 CFR 1500-2[e]). The baseline for the SELRP is the existing environmental

conditions against which impacts of the proposed action and its alternatives can be compared for both CEQA and NEPA. The analysis generally does not provide a separate conclusion distinguishing between the NEPA and CEQA baselines, as defined below.

In accordance with Section 15125 of the CEQA Guidelines, the baseline condition under CEQA is typically defined by the physical environmental conditions in the vicinity of a project as they exist at the time of the NOP, which, for the SELRP, was November 2011. Identifying the baseline condition for most projects is relatively straightforward, since many resources remain relatively static or change slowly over time. This is not the case for the SELRP, given that the conditions at the lagoon are dynamic and the coastal littoral process is seasonally and annually variable, influenced by environmental circumstances such as tidal fluctuations and storm events. Because of the dynamic conditions at the lagoon and along the coast, defining the baseline for the proposed project must consider this fluctuation in "existing conditions." For the SELRP, the analysis tries to capture rapidly transitioning habitat, for example, in the existing condition. In addition, extensive modeling was required to establish an average condition that realistically reflects existing conditions. The SELC and other agencies have historically gathered a large amount of data on selected topics, i.e., water quality and biology, which provides a large body of information. This provides a broader understanding of baseline than a single point in time. Therefore, some of the analyses within this EIR/EIS are reliant on baseline data that differs from, and is not limited to, the November 2011 issuance of the NOP and NOI. Each issue area section discusses the applicable baseline condition for the analysis.

3.0.3 DEFINITION OF KEY IMPACT TERMINOLOGY

Potential direct and indirect, as well as both permanent and temporary, impacts would occur with implementation of the SELRP. These impacts are defined below.

> Direct: Direct impacts are caused by the action and occur at the same time and place as the action.
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> Indirect: Indirect impacts occur later in time or are farther removed in distance but are still reasonably foreseeable and attributable to project-related activities.
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> Permanent (long-term): All impacts that result in irreversible effects or removal of resources are considered permanent.
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> Temporary (short-term): Any impacts considered to have reversible effects on resources may be viewed as temporary.

Each impact is also further classified under both CEQA and NEPA. Under NEPA, determination of impacts that would result in substantial adverse effects on the environment is made. One of the following phrases is used to describe each impact as part of the analysis pursuant to CEQA:

No impact: A designation of no impact is given when no adverse changes in the environment are expected.

Less than significant impact: A less than significant impact is identified when the proposed project or alternatives would cause no substantial adverse change in the environment (i.e., the impact would not reach the threshold of significance).

Significant impact: A significant (but mitigable or avoidable) impact is identified when the proposed project or alternative would create a substantial or potentially substantial adverse change in the physical conditions within the affected resource area. Such an impact would exceed the applicable significance threshold established by CEQA, but would be reduced to a less than significant level by application of one or more mitigation measures.

Significant unavoidable impact: A significant unavoidable impact is identified when an impact that would cause a substantial adverse effect on the environment could not be reduced to a less than significant level through feasible mitigation measure(s).